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Claims

1. Toy building block (1), capable to being stacked, with at least one stud (3) on the top surface (4) and at least one recess (6) in the bottom surface (7), wherein the studs (3) are insertable in the recesses (6), characterized in that the cross-section of the studs (3) is toothwheel-like, the studs (3) showing a circumferentially arranged, substantially equally spaced sequence of teeth with rounded crests (12) and interspersed grooves (10) rounded as well,
- in that the sidewall of the recesses (6) is provided with at least one essentially vertically extending land shaped complementary to the grooves (10), and
- in that the recesses (6) are shaped the way that a stud (3) inserted in the recess is guided by at least three zones of contact, at least one of which being a land (6) engageable in a groove (10).
2. Toy building block (1) according to claim 1, characterized in that at least three lands (14), preferably four, six or eight lands, and most preferred four lands, are present in the recess (6).
3. Toy building block (1) according to one of claims 1 or 2, characterized in that the lands (14) constitute the majority and preferably all contact zones for guiding a stud (3) when inserted.
4. Toy building block (1) according to one of claims 1 to 3, characterized in that the studs (3) show a rotational symmetry of at least 4.
5. Toy building block (1) according to one of claims 1 to 4, characterized in that the rotational symmetry of the

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studs is 6, 8 or 12, preferably 8.

6. Toy building block (1) according to one of claims 1 to 5, characterized in that it consists of essentially cubic constructional units, each construction unit being provided with one stud (3) and one recess (6).

7. Toy building block (1, 33, 37) according to one of claims 1 to 6, characterized in that centrally in at least one stud (3) or one recess (6), a pass-through hole (17) is provided with a first thread (19), the hole (17) extending from top to bottom of the building block (1), so that a screw (21) may be screwed through the construction block (1).

8. Toy building block (1, 33, 37) according to claim 7, characterized in that the holes (17) are provided with an enlargement within the studs (3) for being capable of receiving the head of a screw (21).

9. Toy building block (1, 33, 37) according to one of claims 1 to 8, characterized in that it is manufactured by blowing, preferably by blowing of a material comprising polymeric mass as an essential constituent, in order to obtain a hollow, light-weight product.

10. Toy building block (1, 33, 37) according to one of claims 1 to 9, characterized in that it is provided with slots (46), preferably vertically extending slots, for holding edges of construction devices like panels (47).

11. Toy building block according to one of claims 1 to 10, characterized in that it consists of a bivalent building block (67) having only recesses (6), and at least one stud (3) is realized by a piece (70, 78) having the outer

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shape of a stud (3), yet about double its length, so that it constitutes a stud (3) when inserted in a recess (6) of the bivalent building block.

5 12. Toy building block set comprising at least one toy building block according to one of claims 7 to 11, characterized in that it further comprises at least one screw (21, 31, 35; 74) which is provided with a head (29), a
10 2nd thread (23) matched with the first thread (19) on the middle part of its body, a third thread (25) on its body terminal section, the third thread having a smaller diameter than the 2nd thread, and a fourth inner thread (27) in the head (29) of the screw, the fourth thread (27) being matched with the third thread so that the screw may be screwed in
15 the head of another one.

13. Toy building block set comprising at least one toy building block according to one of claims 7 to 11 or a toy building block set according to claim 12, characterized in
20 that it comprises at least one screw (21, 31, 35; 74) with a second thread (23) on its body being matched to the first thread (19) for being screwed into the hole (17) of a toy building block, and in that the head (29) of the screw is provided with a recess (39), the recess having a cross-
25 section composed of regularly arranged, inwardly directed crests (40) separated by circle-likely shaped grooves (41), so that a complementarily shaped end of a tool (43) may be inserted and rotationally fixed in the head (29).

30 14. Toy building block according to claim 13, characterized in that the cross-section of the recess (39) in its head (29) has at least four, preferably 6 to 12 crests (40).

15. Toy building block set according to one of claims
35 12 or 13, characterized in that at least one, preferably

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all, of the screws (21, 31, 35; 74) is provided with a head (29), a 2nd thread (23, 82) matched with a first thread (19; 84), on the middle part of its body, a third thread (25) on its body terminal section, the third thread having a smaller diameter than the 2nd thread, and a fourth inner thread (27) in the head (29) of the screw, the fourth thread (27) being matched with the 3rd thread so that the screw may be screwed in the head of another one.

10 16. Toy building block set according to one of claims 12 to 15, characterized in that it comprises a screwdriver tool (43) for a screw (21, 31, 35; 74), the screwdriver being essentially a rod with its cross-section being essentially complementarily shaped to the recess (39) in the screw (21, 15 31, 35).

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